

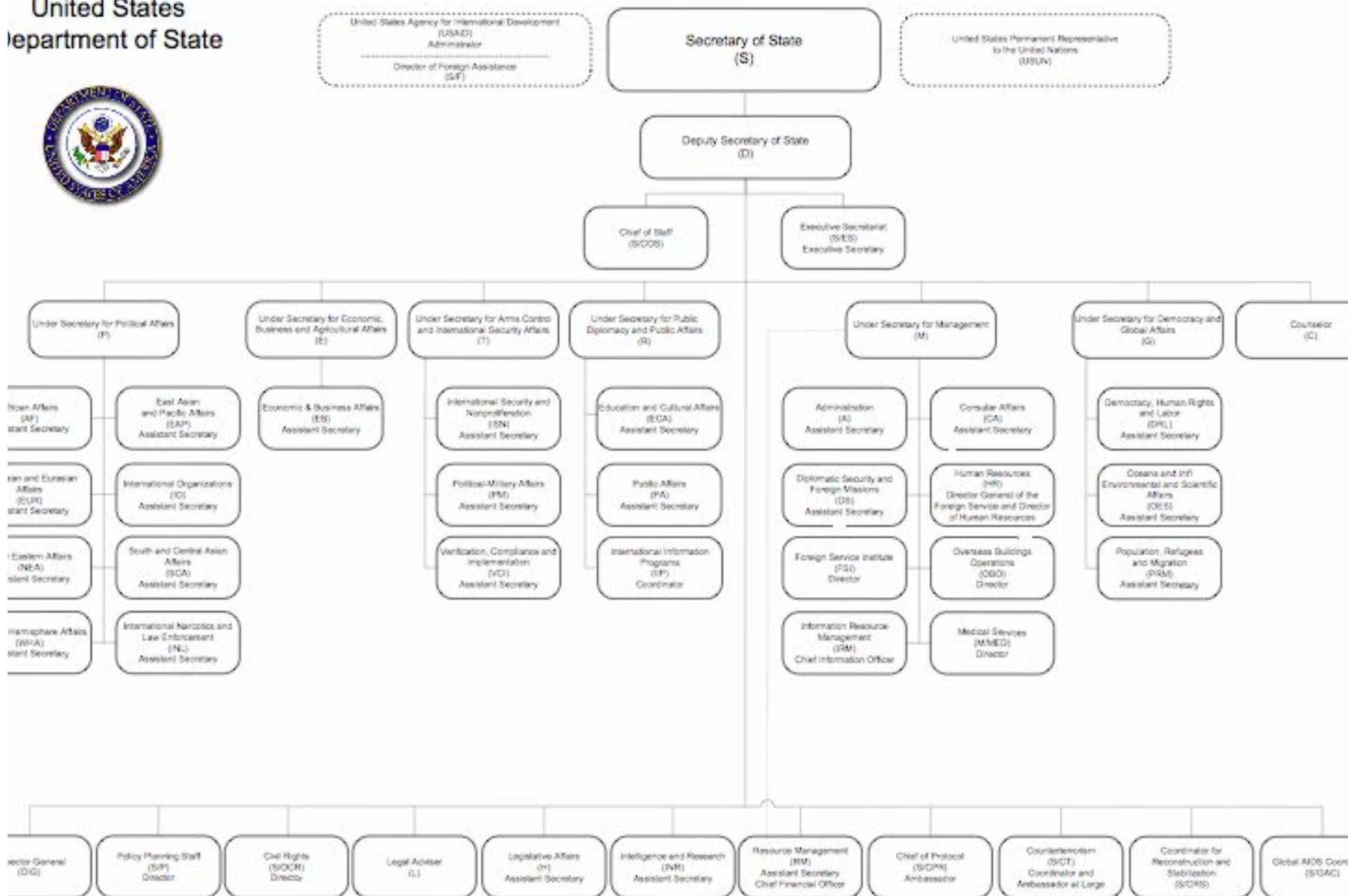


# **U. S. State Department and Science & Technology**

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***&***

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# United States Department of State



Approved by S/ES May 2011



# Why Science & Technology in the State Department ?

- *The pursuit of scientific knowledge is no longer contained within one country's borders.*
  - *research cooperation, Human Genome etc.*
- *International problems require international solutions.*
  - *bird flu, global climate change, security etc.*
- *World's prosperity depends on development, creation of jobs, etc., which require better education and science and technology (S&T); never know where the next Einstein will come from.*



# Office of S&T Advisor to the Secretary (STAS)

*Created in 2000 to greatly strengthen the role of S&T within the U.S. foreign policy community in the U.S. and at its embassies, the STAS is the “principal interlocutor” for S&T in the Dept. of State (DoS) and is responsible to:*

- 1. enhance the S&T literacy and capacity of the DoS.*
- 2. build partnerships with the U.S. and international S&T communities.*
- 3. provide accurate S&T advice to the Secretary of State and other senior DoS officials.*
- 4. develop initiatives to enhance “forward looking” proactive leadership within DoS on global S&T issues.*



# Fellowships

- *American Association for the Advancement of Science (AAAS) Fellowships*

- *Professional Science Society Fellowships.*

*American Institute of Physics, Institute of Electrical and Electronics Engineers, American Chemical Society*

- *Jefferson Science Fellowships : a pilot program that started in 2004.*

- *S&T Student Internships (in the U.S and abroad).*

- *Embassy Science Fellows (from the USG).*



# Jefferson Science Fellows

*Tenured U.S. academic faculty in the Dept. of State for 1 year of service followed by 5 years of consultancy*

- *Engaging U.S. S&T academics in the formulation and implementation of U.S. foreign policy.*
- *Over 70 U.S. universities have signed MOUs to participate. Universities pay the salaries and benefits for their faculty selected to be JSFs.*
- *A public-private partnership among the MacArthur Foundation, Carnegie Corporation, and U.S. universities with the Dept. of State.*



*2006-2007*



*2004-2005*



*2005-2006*





Office of Public Diplomacy and Public  
Affairs (PDPA)/Bureau of African  
Affairs (AF)

Office of Science and Technology  
Cooperation (STC)/Bureau of Oceans and  
International Environment and Scientific  
Affairs (OES)





# Benefits to S&T Cooperation

- *Exchange ideas, information, skills, and technologies for peaceful purposes.*
- *Person-to-person exchanges of scientists and technical experts.*
- *Enhance innovation.*
- *Create jobs.*



# Benefits to the U. S. from S&T Cooperation\*

- *To maintain and continually improve the quality of each country's science by applying global standards of excellence. (**Performing to the highest standards**)*
- *To provide access by U.S. and partnering scientists to the frontiers of science without regard to national borders. (**Access to the frontiers**)*
- *To increase the productivity of science through collaborations between U.S. scientists and the world's leading scientists from partnering countries.*
- *To strengthen each country's science through visits and exchanges by outstanding scientists from other nations.*

\* Adapted from OSTP.



# Benefits to the U. S. from S&T Cooperation (ctd.)

- *To increase global national security and economic prosperity by fostering the improvement of conditions in developing countries through increased technical capability. (Security through technology-based equity)*
- *To accelerate the progress of science across a broader front than one country may choose to pursue with its own resources.*
- *To address global issues that one country alone could not address.*
- *To increase prestige and influence for scientists and institutions from all nations. (Science for glory and PUBLIC DIPLOMACY)*



# Agency-to-Agency Agreements

- *Agency-to-Agency memoranda of understanding (MOUs) or project-specific agreements.*
- *Usually limited in scope and duration, may (or may not) be legally binding, and may (or may not) address significant procedural issues.*
- *No African agency is involved so far.*

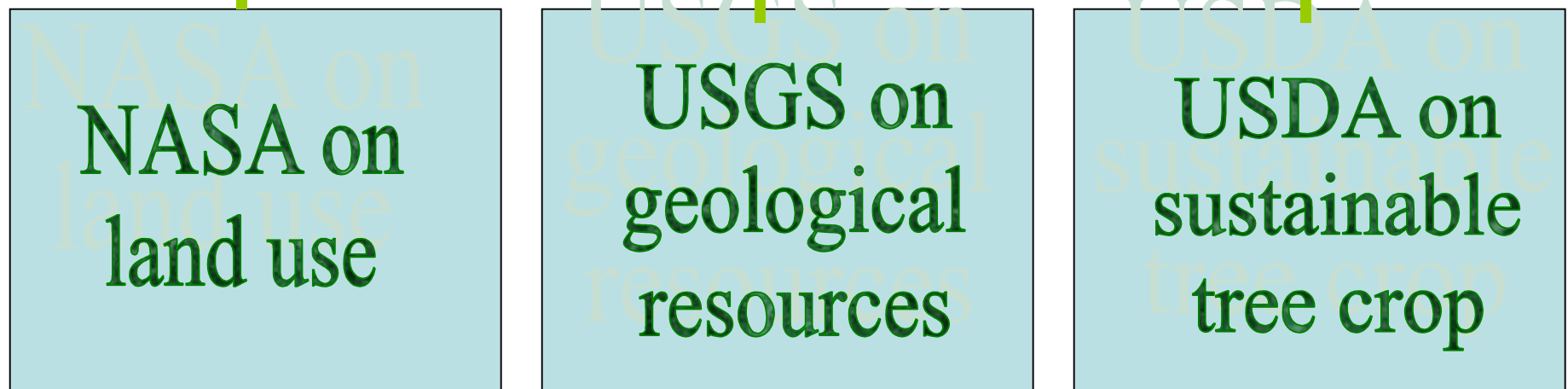


# “Umbrella” Agreements

- *These are S&T agreements are broad scope. Umbrella (or framework) agreements are designed to facilitate government sponsored scientific interactions.*
- *Umbrella agreements set certain parameters for the collaboration in a legally binding document between governments.*
- *Currently Over 30 S&T Agreements.*
- *Only two countries from Africa are involved so far : South Africa and Cape Verde.*



# **S&T Umbrella Agreement**





# The Parameters

*S&T Agreements establish important ground rules for collaboration:*

- *non-taxation of U.S. assistance, and*
- *protection and distribution of intellectual property rights.*





# Taxation

- *2003 – Foreign Operations Appropriations Act (and subsequent Acts) – any US assistance exempt from taxation or reimbursed by foreign government.*
- *Taxation of U.S. assistance under the S&T agreement occurs on a very limited basis. However, this is a requirement of U.S. law.*
- *Inclusion of language is beneficial – removes a barrier which otherwise may have caused concern.*



# Intellectual Property Rights

- *S&T collaboration has potential to create intellectual property.*
- *Important to establish clear IP guidelines in advance of any collaboration.*
- *Disputes over rights to IP are very difficult to work out once new technologies are created.*
- *Concerns over benefit sharing have brought promising research to a halt.*
- *Clear guidelines have had positive impact and have encouraged collaboration.*



# U. S. S&T Priorities

- *R&D for Homeland and National Security.*
- *Nanotechnology.*
- *Networking and Information Technology R&D.*
- *Environment and Energy.*
  - *Climate change; environmental observations; hydrogen R&D.*
- *Biotechnology and Bio-informatics.*

# Possible U. S./Africa S&T Interactions and Ongoing Activities



- *Communication with Africans in S&T : scientists and science policy makers.*
  - *Country name lists of key S&T individuals, African Academy of Science, New Partnership for Africa's Development (NEPAD), African Diaspora, Research Centers etc.*
- *Meetings, symposia, and workshops promoting research interactions between U. S. and African scientists.*
  - *Possible support by USAID (agriculture and health - materials?, engineering & education ?).*
  - *Global Dialogue in Emerging Science and Technology (GDEST). Themes and topics in energy, health, agriculture, environment, materials etc.*
- *Fellowships, training and study abroad opportunities.*
  - *Office of Educational and Cultural Affairs (ECA).*



# Possible U. S./Africa S&T Interactions and Ongoing Activities (ctd.)

- *U. S. university-AF university partnership.*
  - *Books, computers, web-based teaching etc. USAID and Higher Education for Development (HED).*
  - *African universities administered/mentored by American universities.*
- *Primary education (USAID) - mathematics and science ?*
- *International organizations support for S&T ?- e. g. UNESCO.*
- *Millennium Challenge Funds for S&T ??*
- *African Growth and Opportunity Act (AGOA) in S&T-related small business and trade ??*
- *S&T for **Public Diplomacy** and **“Winning Hearts and Minds”**.*



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